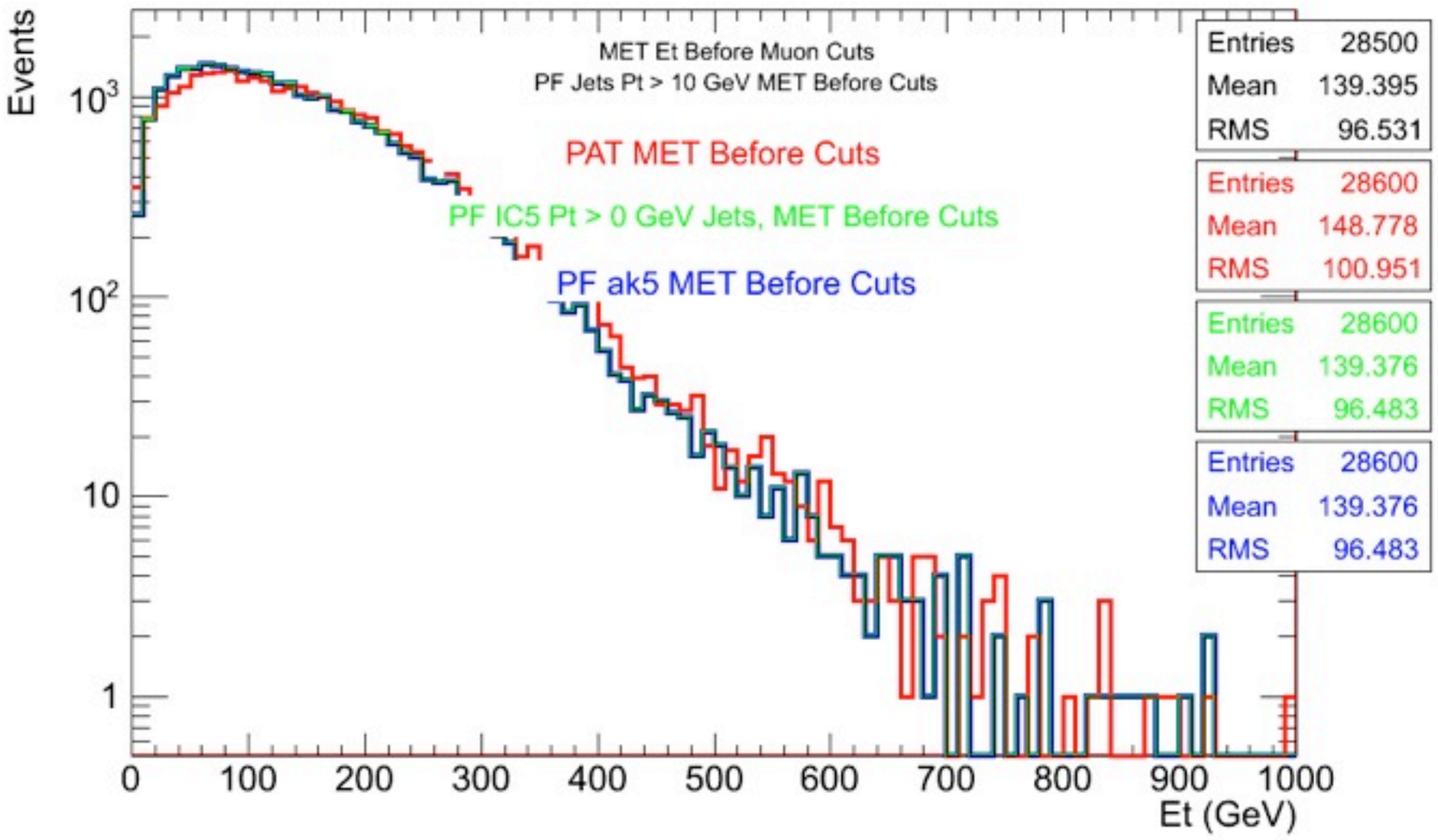
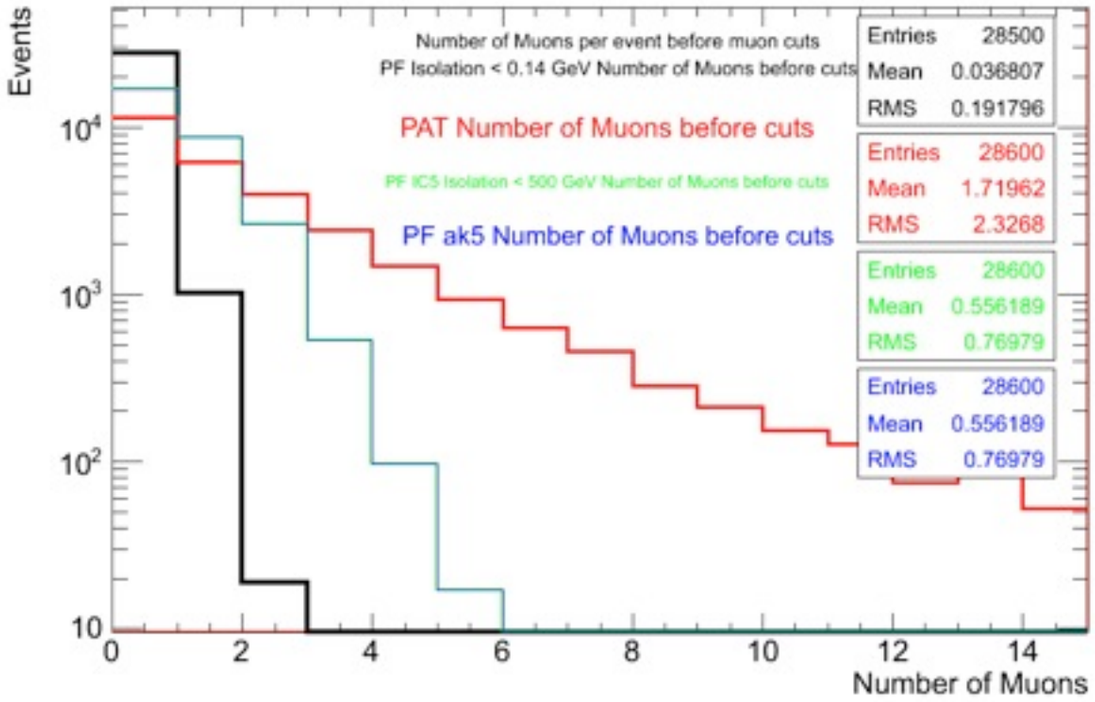
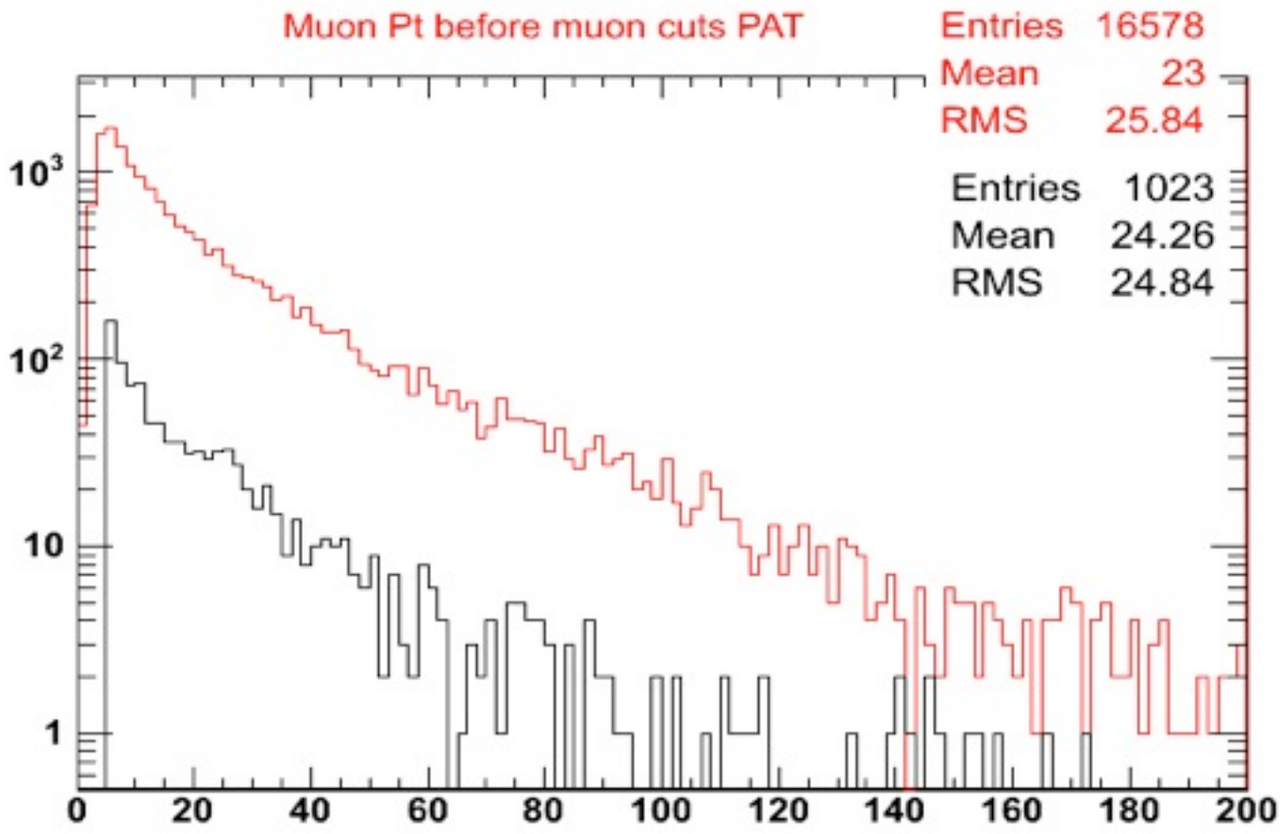
- First 4 slides show physics objects compared between PF and PAT, PF using IC5 and ak5, and changing the pt Jet threshold and muon isolation parameter
- Second set of 5 slides , event display of one event with 10 muons in normal PAT ntuple with PF ntuple

MET

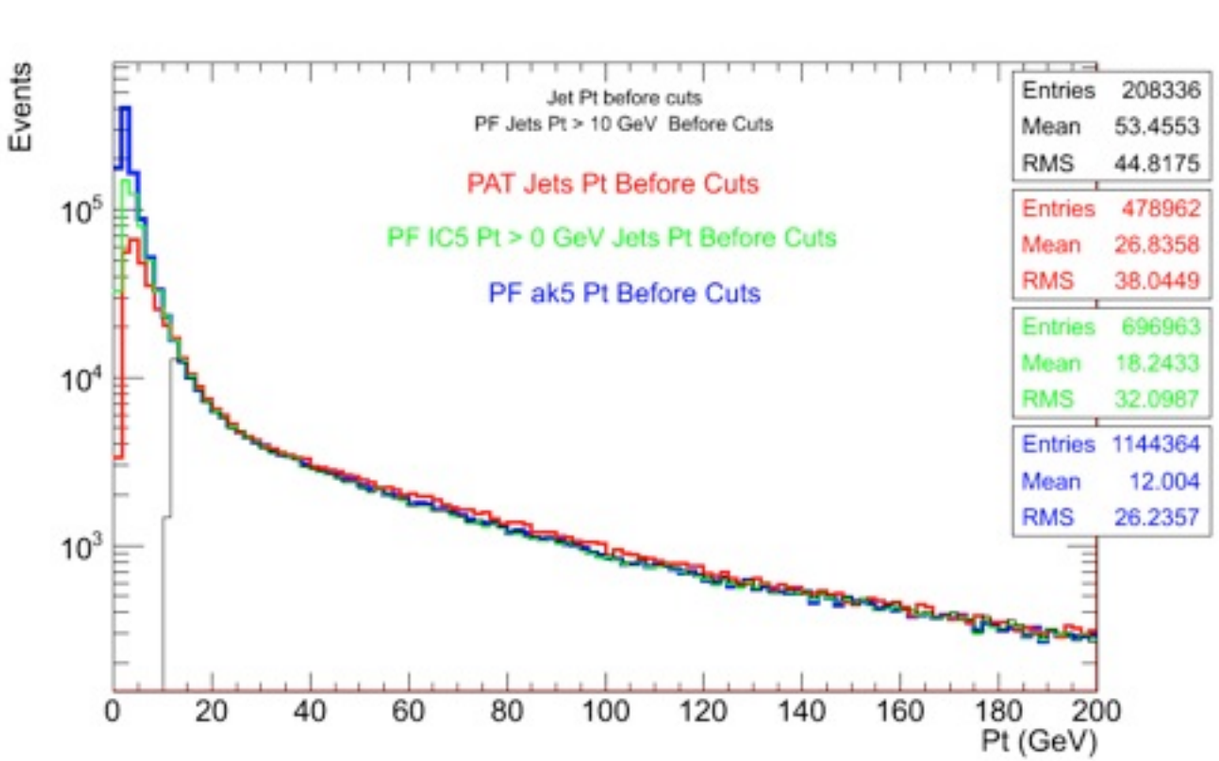

MET Et Before Muon Cuts
PF Jets Pt > 10 GeV MET Before Cuts
PAT MET Before Cuts
PF IC5 Pt > 0 GeV Jets, MET Before Cuts
PF ak5 MET Before Cuts
Entries 28500
Mean 139.395
RMS 96.531
Entries 28600
Mean 148.778
RMS 100.951
Entries 28600
Mean 139.376
RMS 96.483
Entries 28600
Mean 139.376
RMS 96.483
Events
10^3
10^2
10
1
0
100
200
300
400
500
600
700
800
900
1000
Et (GeV)

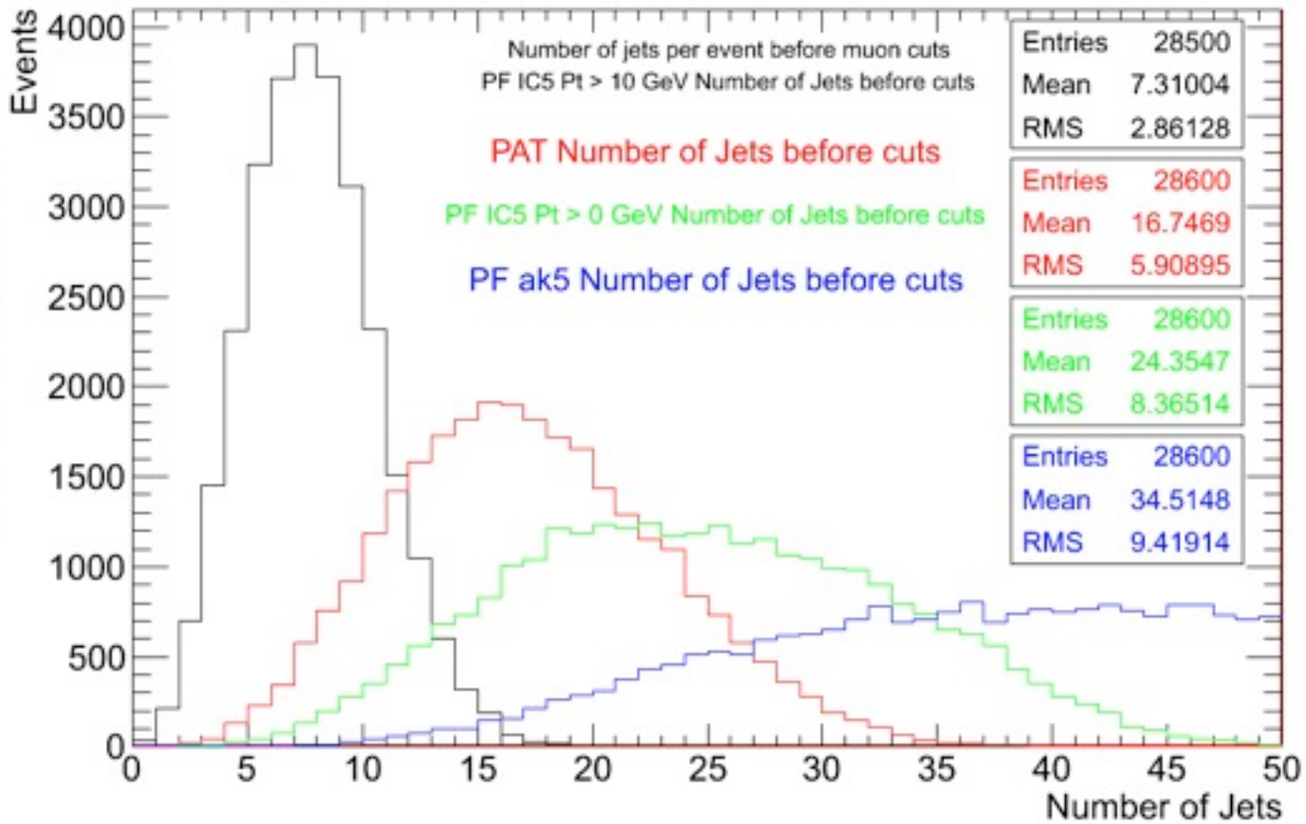
Muon


Events
Number of Muons per event before muon cuts
PF Isolation < 0.14 GeV Number of Muons before cuts
PAT Number of Muons before cuts
PF IC5 Isolation < 500 GeV Number of Muons before cuts
PF ak5 Number of Muons before cuts
Entries 28500
Mean 0.036807
RMS 0.191796
Entries 28600
Mean 1.71962
RMS 2.3268
Entries 28600
Mean 0.556189
RMS 0.76979
Entries 28600
Mean 0.556189
RMS 0.76979
10^4
10^3
10^2
10
0 2 4 6 8 10 12 14
Number of Muons

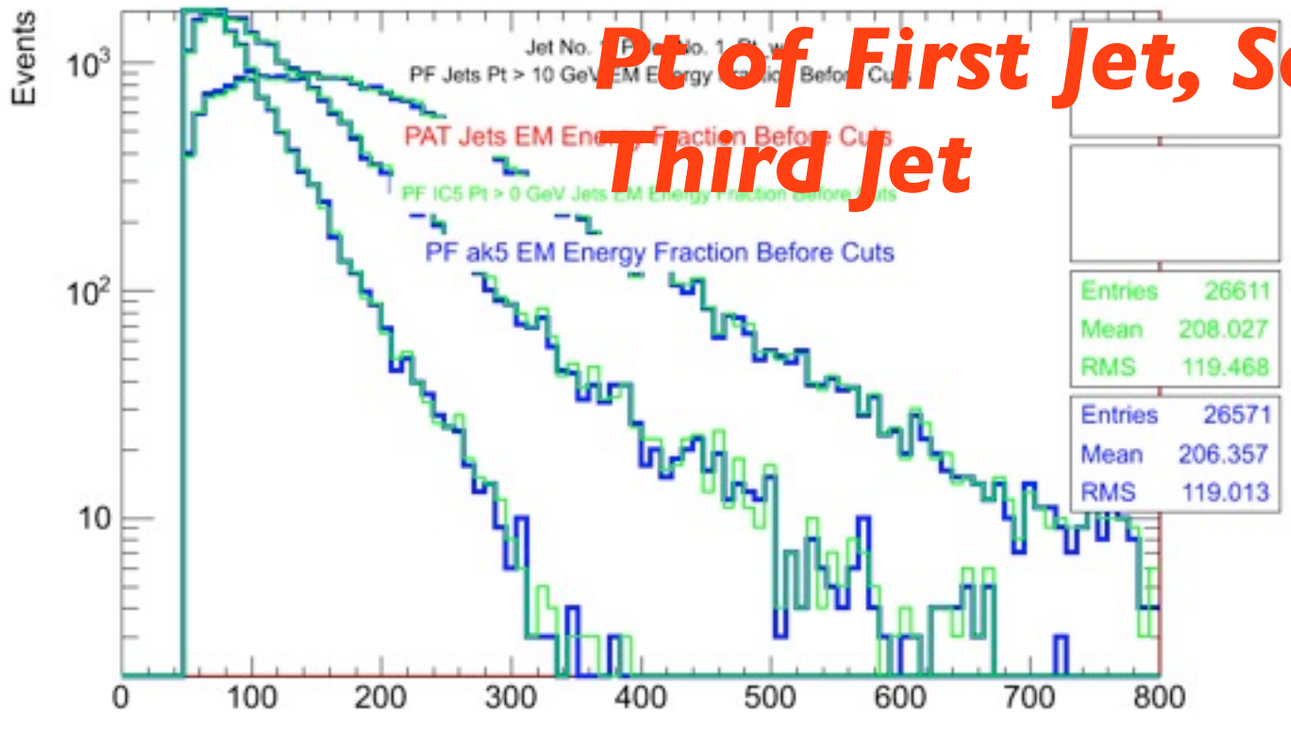

Muon Pt before muon cuts PAT
Entries 16578
Mean 23
RMS 25.84
Entries 1023
Mean 24.26
RMS 24.84
10^3
10^2
10
1
0 20 40 60 80 100 120 140 160 180 200

Jets

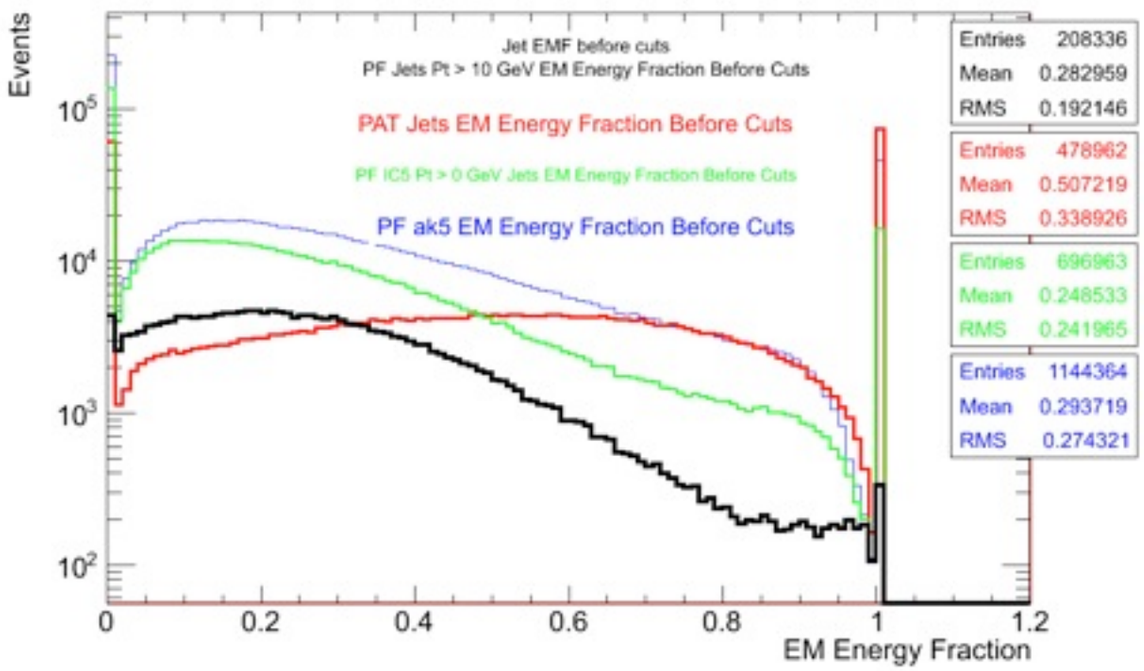

Jet Pt before cuts
PF Jets Pt > 10 GeV Before Cuts
PAT Jets Pt Before Cuts
PF IC5 Pt > 0 GeV Jets Pt Before Cuts
PF ak5 Pt Before Cuts
Entries 208336
Mean 53.4553
RMS 44.8175
Entries 478962
Mean 26.8358
RMS 38.0449
Entries 696963
Mean 18.2433
RMS 32.0987
Entries 1144364
Mean 12.004
RMS 26.2357
Events
Pt (GeV)

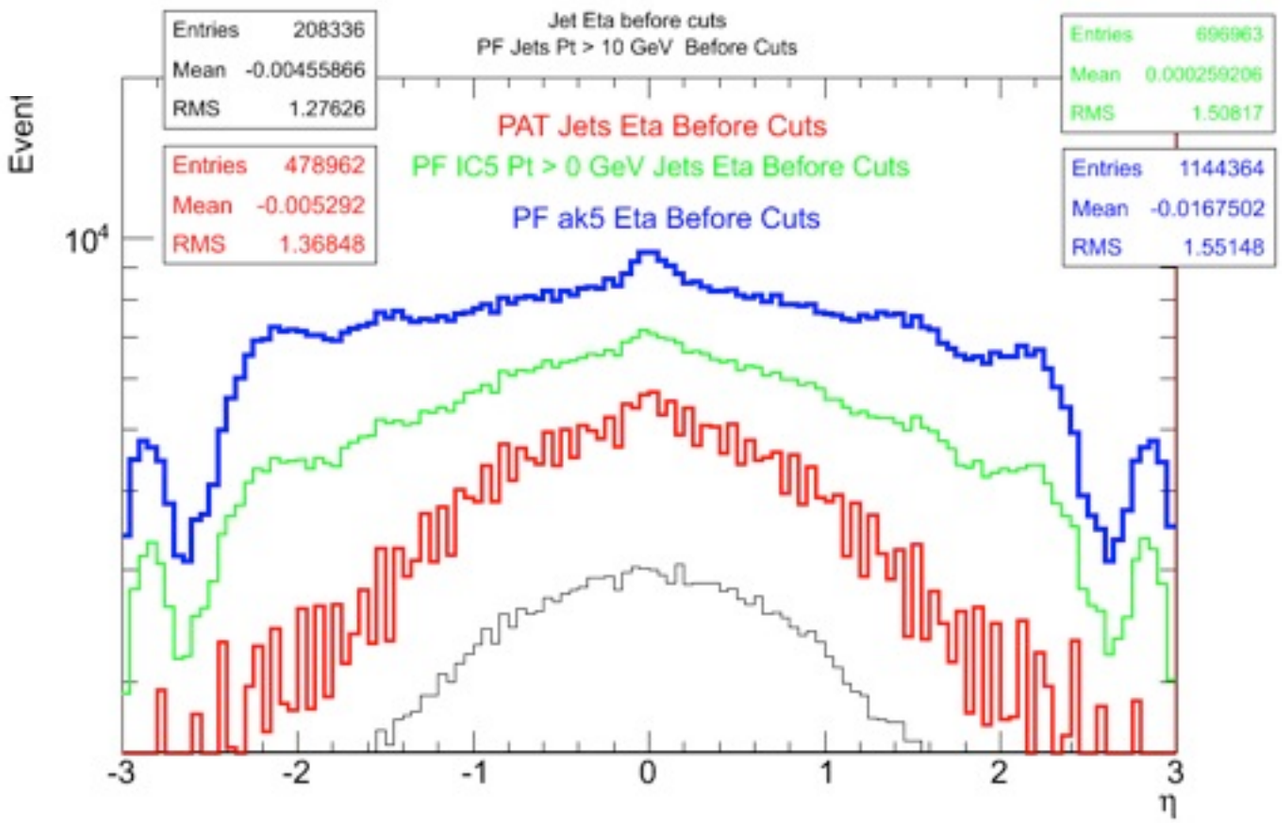

Number of jets per event before muon cuts
PF IC5 Pt > 10 GeV Number of Jets before cuts
PAT Number of Jets before cuts
PF IC5 Pt > 0 GeV Number of Jets before cuts
PF ak5 Number of Jets before cuts
Entries 28500
Mean 7.31004
RMS 2.86128
Entries 28600
Mean 16.7469
RMS 5.90895
Entries 28600
Mean 24.3547
RMS 8.36514
Entries 28600
Mean 34.5148
RMS 9.41914
Events
Number of Jets

Jets Eta



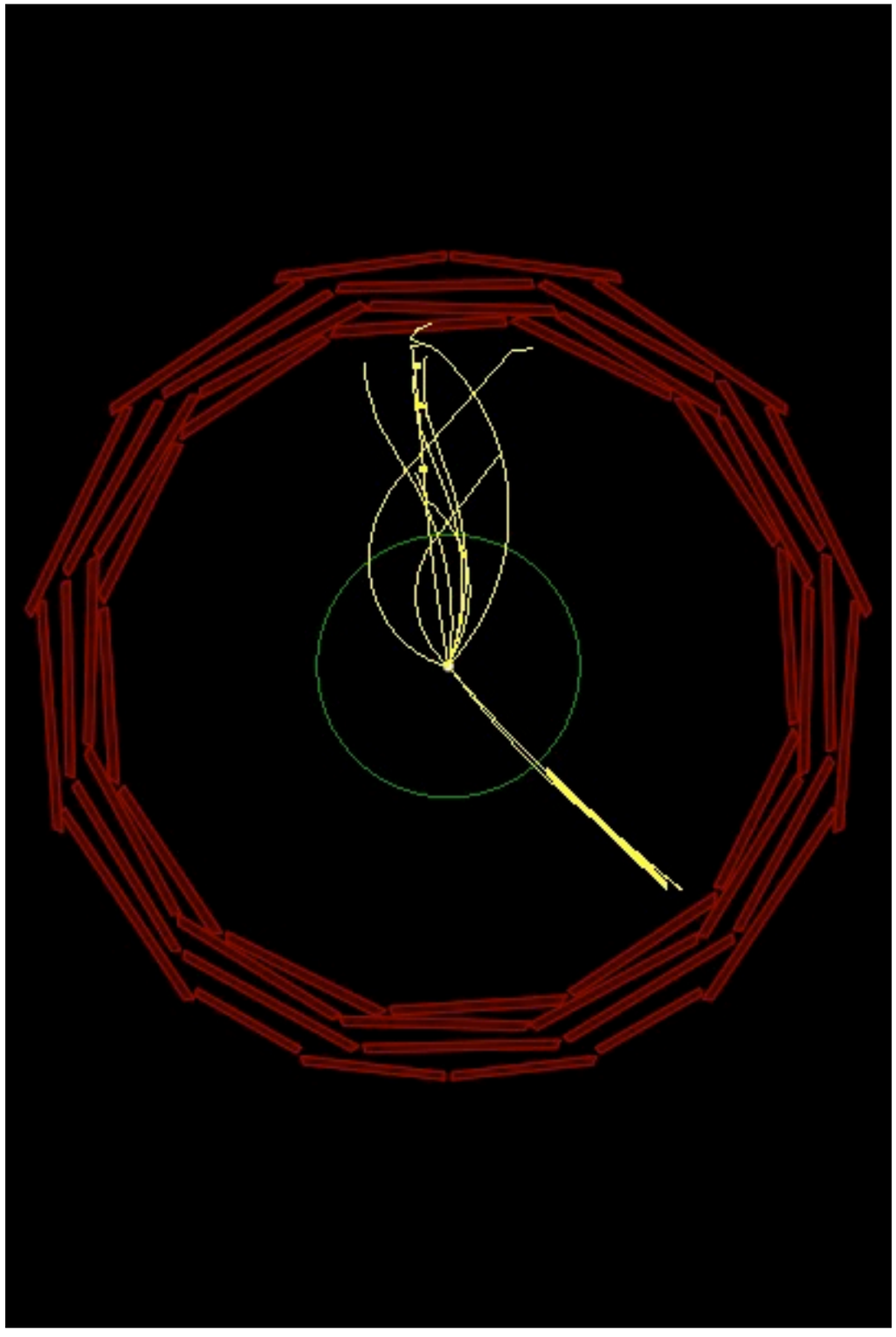
Pt of First Jet, Second Jet and Third Jet



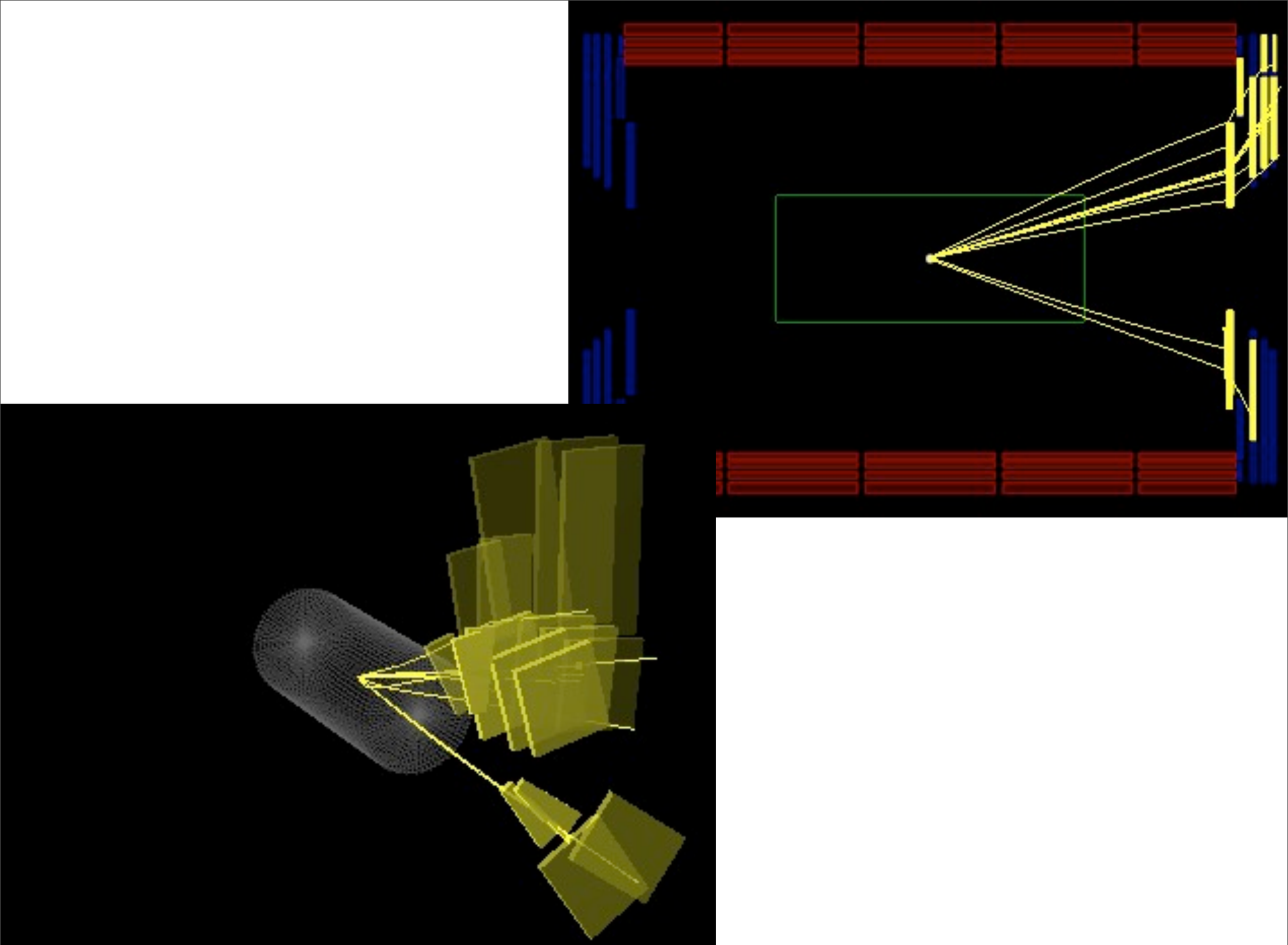


Event with 10 Muons in PAT and only 1 in PF

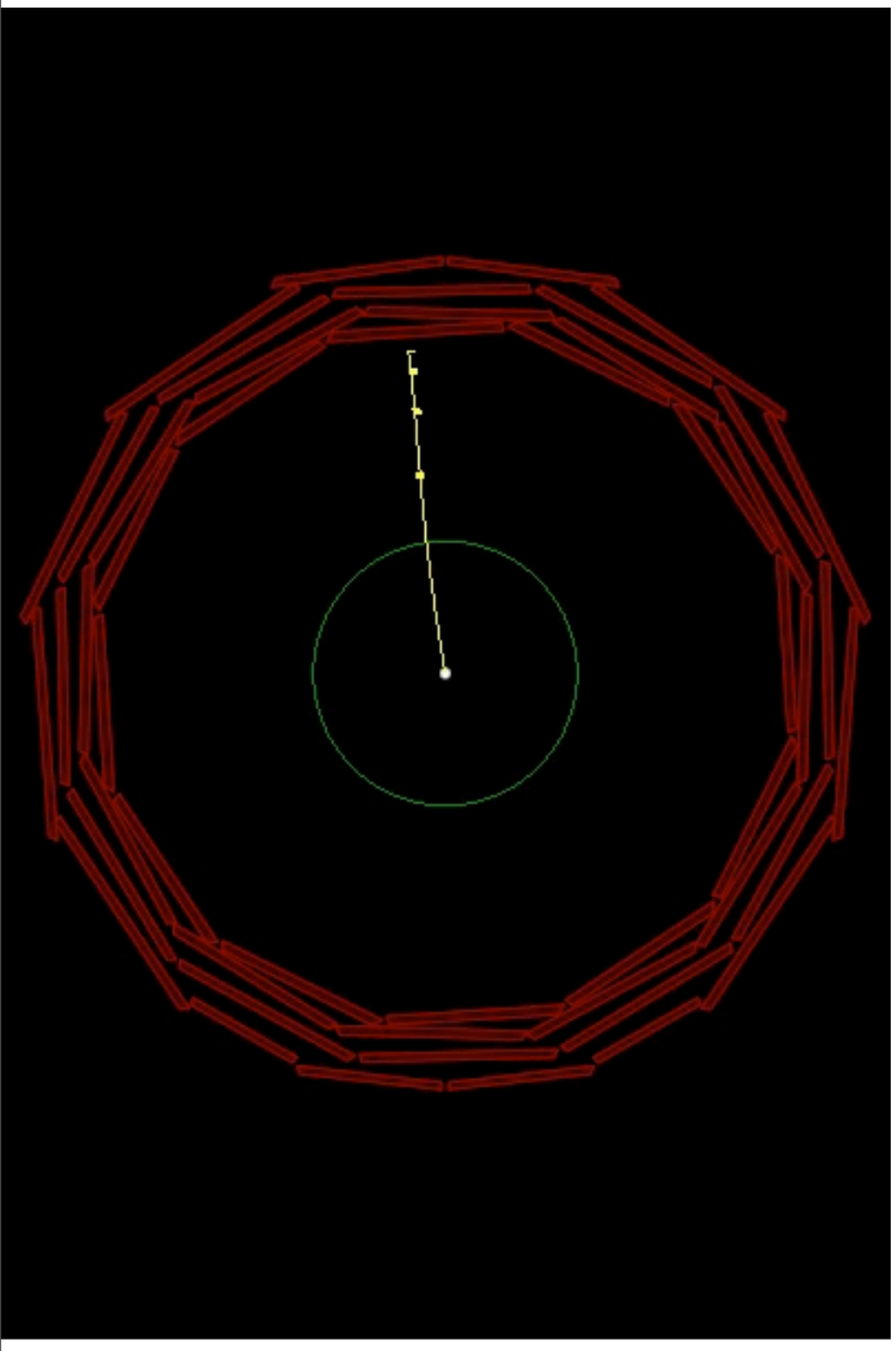
Event with 10 muons in PAT



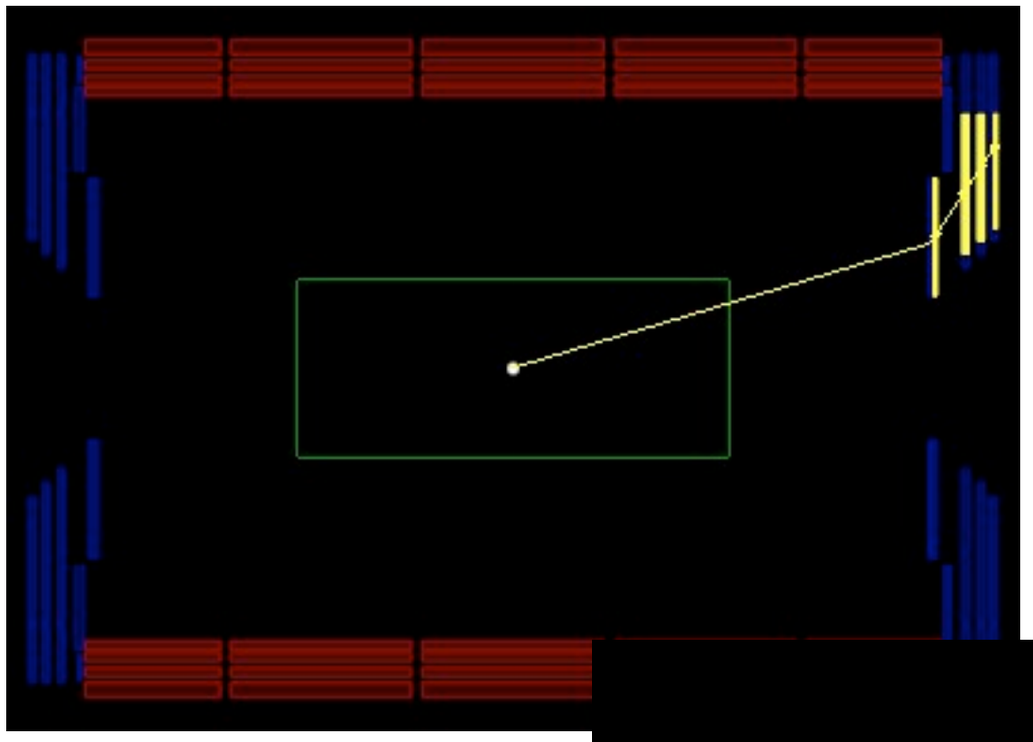
Pt	global	track	SA	calo	tr pt	eta	phi	matches	d0	d0/d0err	charge
20.1	TRUE	TRUE	TRUE	FALSE	20.1	1.926	1.746	4	0.065	11.12	1
13.7	FALSE	TRUE	FALSE	FALSE	13.7	1.706	-0.875	1	-0.031	-5.192	-1
8.8	FALSE	TRUE	FALSE	FALSE	8.8	1.703	-0.933	1	-0.223	-18.23	-1
3.0	FALSE	TRUE	FALSE	FALSE	3.0	1.908	1.430	3	0.032	2.563	-1
2.8	FALSE	TRUE	FALSE	FALSE	2.8	1.925	1.222	3	0.055	4.369	-1
2.7	FALSE	TRUE	FALSE	FALSE	2.7	1.960	1.247	3	0.038	2.872	-1
2.5	FALSE	TRUE	FALSE	FALSE	2.5	1.442	0.878	1	0.039	3.119	-1
1.5	FALSE	TRUE	FALSE	FALSE	1.5	1.636	2.810	1	-0.991	-52.11	-1
1.3	FALSE	TRUE	FALSE	FALSE	1.3	1.983	0.966	2	-2.742	-15.82	-1
1.0	FALSE	TRUE	FALSE	FALSE	1.0	2.234	2.402	1	0.022	0.967	1

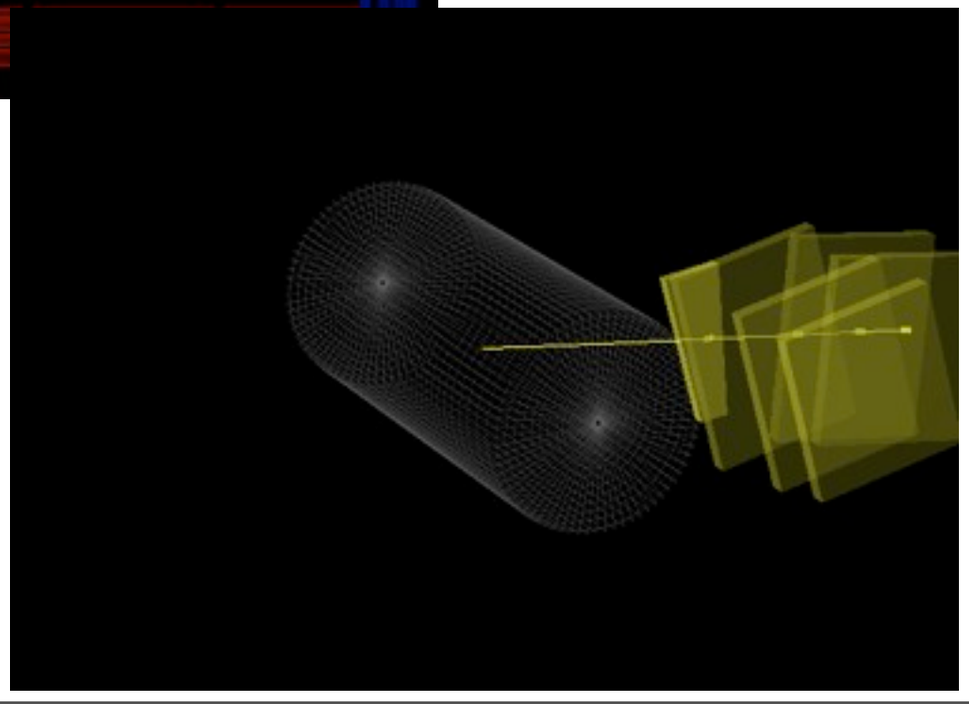


Same Event in PF

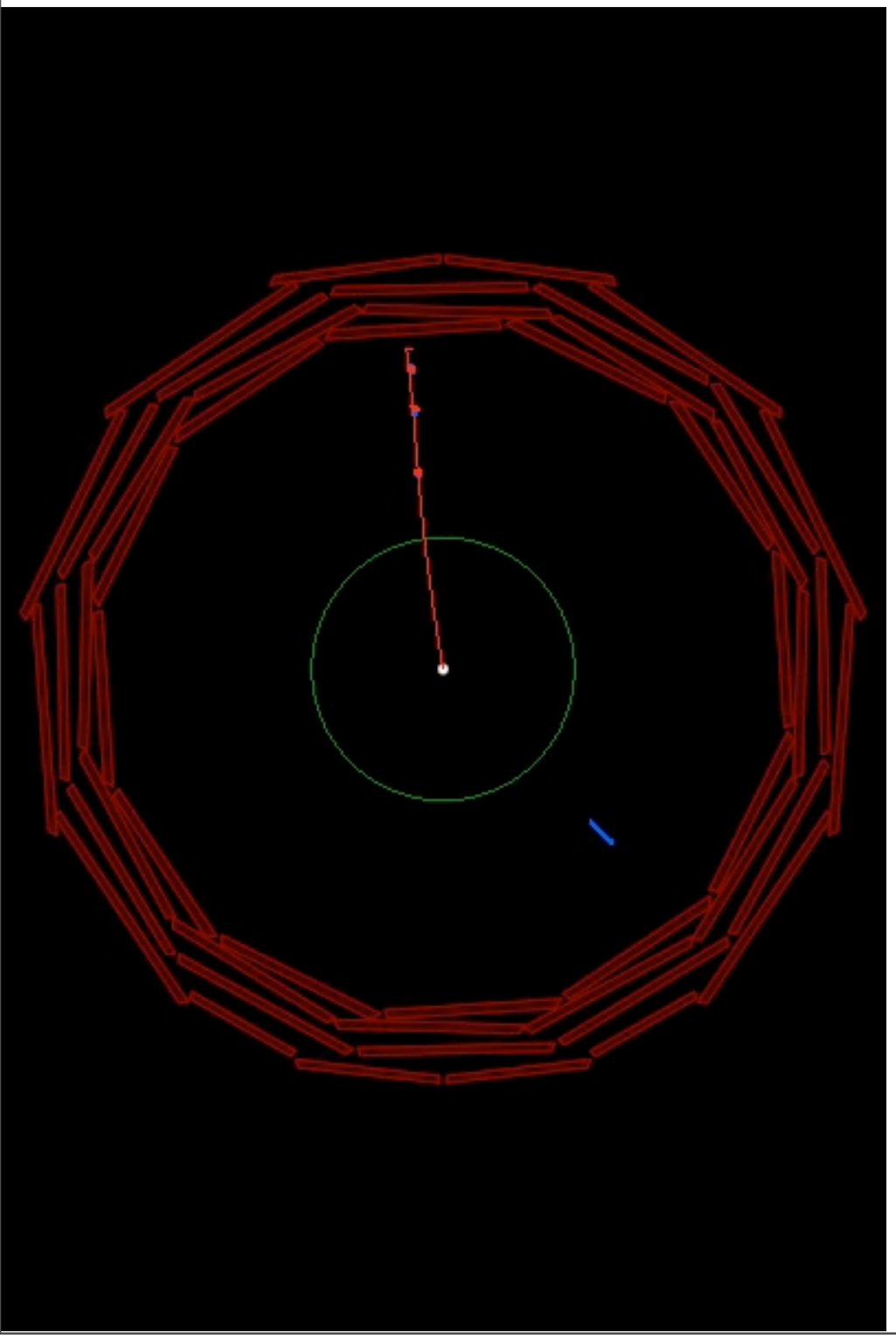
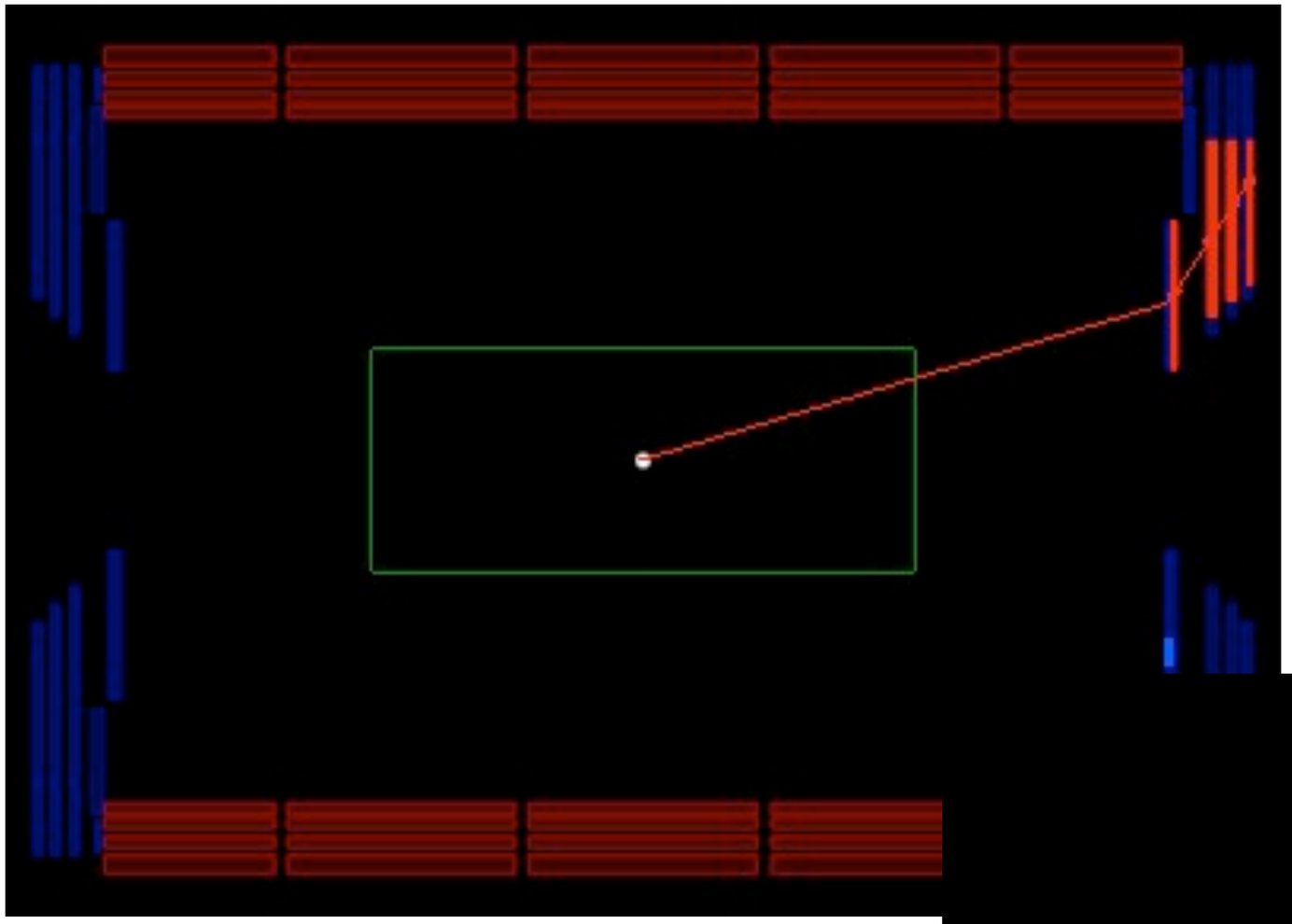
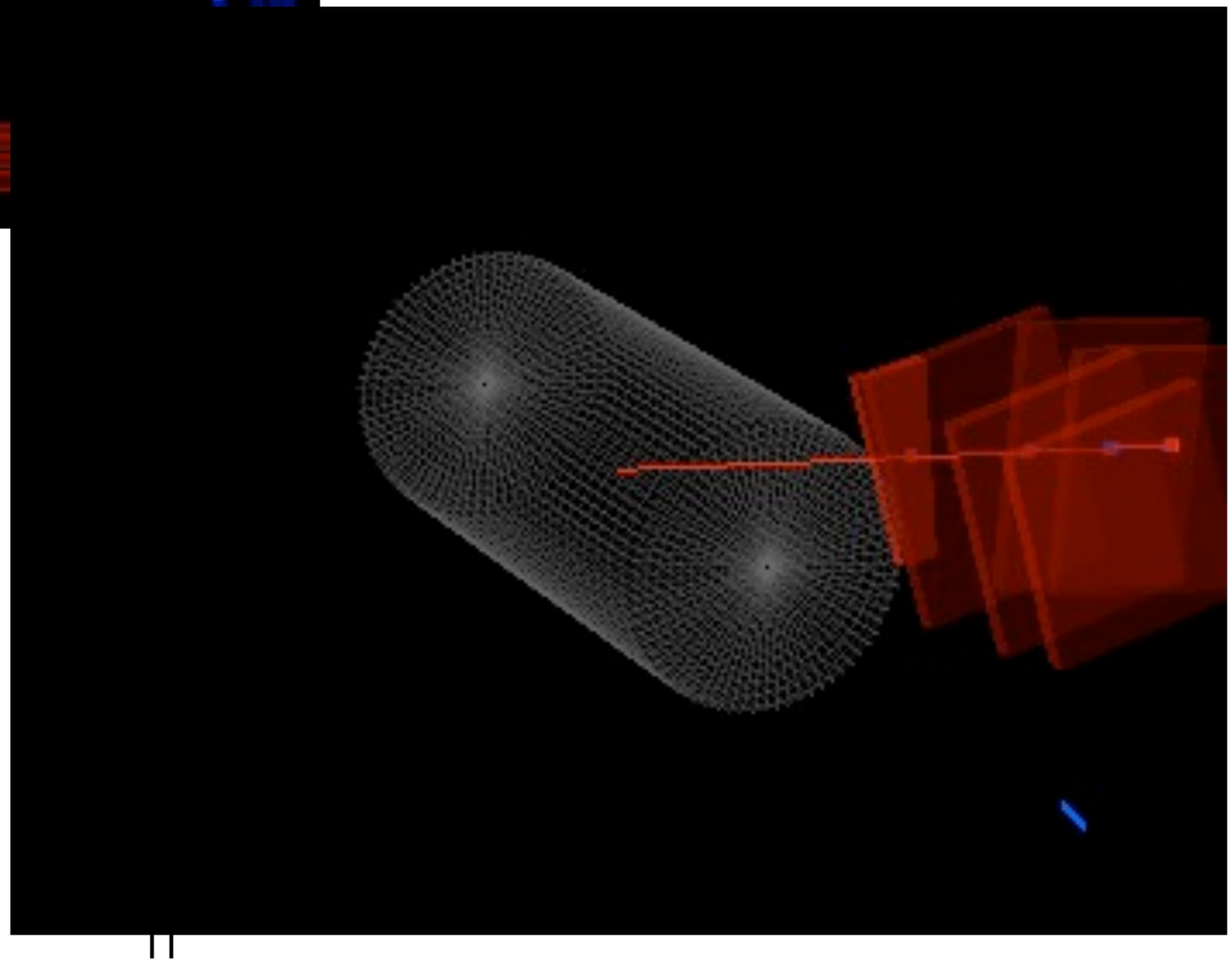


Pt	global	track	SA	calo	tr pt	eta	phi	matches	d0	d0/d0err	charge
20.1	TRUE	TRUE	TRUE	FALSE	20.1	1.926	1.746	4	0.065	11.121	1





Same Event Reco Muons



Pt	global	track	SA	calo	tr pt	eta	phi	matches	d0	d0/d0err	charge
20.1	TRUE	TRUE	TRUE	FALSE	20.1	1.926	1.746	4	0.065	11.12	1
13.7	FALSE	TRUE	FALSE	FALSE	13.7	1.706	-0.875	1	-0.031	-5.192	-1
8.8	FALSE	TRUE	FALSE	FALSE	8.8	1.703	-0.933	1	-0.223	-18.23	-1
3.0	FALSE	TRUE	FALSE	FALSE	3.0	1.908	1.430	3	0.032	2.563	-1
2.8	FALSE	TRUE	FALSE	FALSE	2.8	1.925	1.222	3	0.055	4.369	-1
2.7	FALSE	TRUE	FALSE	FALSE	2.7	1.960	1.247	3	0.038	2.872	-1
2.5	FALSE	TRUE	FALSE	FALSE	2.5	1.442	0.878	1	0.039	3.119	-1
1.5	FALSE	TRUE	FALSE	FALSE	1.5	1.636	2.810	1	-0.991	-52.11	-1
1.3	FALSE	TRUE	FALSE	FALSE	1.3	1.983	0.966	2	-2.742	-15.82	-1
1.0	FALSE	TRUE	FALSE	FALSE	1.0	2.234	2.402	1	0.022	0.967	1